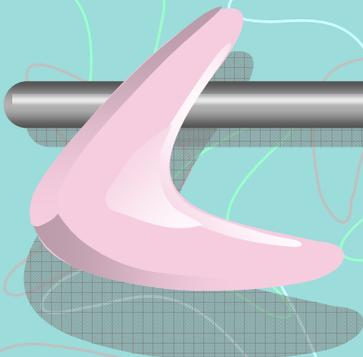


# Protecting the Aquatic Environment Water Quality Standards Triennial Review – August 2007



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# Water Quality Standards

## The Foundation of Protection

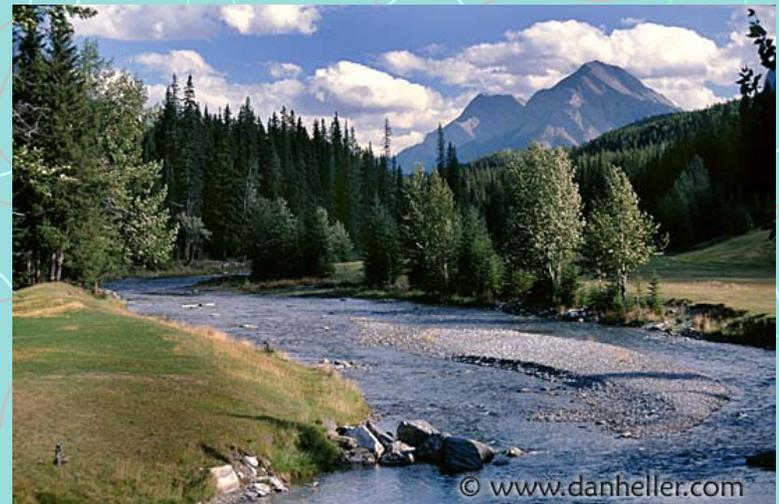
- Antidegradation Policy – Requires Minimal Decreases in Water Quality
  - Category I [No Discharge Allowed]
  - Category II [Discharge only at Background]
  - Level I and Level II Evaluations
- Beneficial Use – Classifications of Levels of Protection
  - 1C Domestic Purposes
    - Protected for use as a raw water source for domestic water systems.
  - 3A Cold Water Fishery
- Numeric Criteria – Numbers that Define the Beneficial Uses
  - 50 ug/l Selenium – 1C
  - 4.6 ug/l Selenium Chronic – 3A
- Narrative Criteria - Narrative that Defines the Beneficial Uses
  - “become offensive”
  - “undesirable physiological responses”

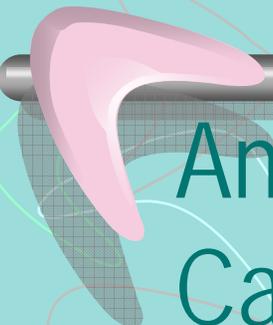


## Rule R317-2.

# Standards of Quality for Waters of the State

- Antidegradation Policy
  - Maintenance of Water Quality
  - High Quality Waters – Category I
  - High Quality Waters – Category II
  - Other waters
    - Activities subject to antidegradation review
      - 401 – FERC [Dams, pipelines]
      - 401 – UPDES Permits [WWTP, Industrial Discharges]
      - 404 – Corps of Engineers [Wetlands]
      - As determined by Executive Secretary of WQB





# Antidegradation Policy:

## Category 1: UPDES Permits not Allowed

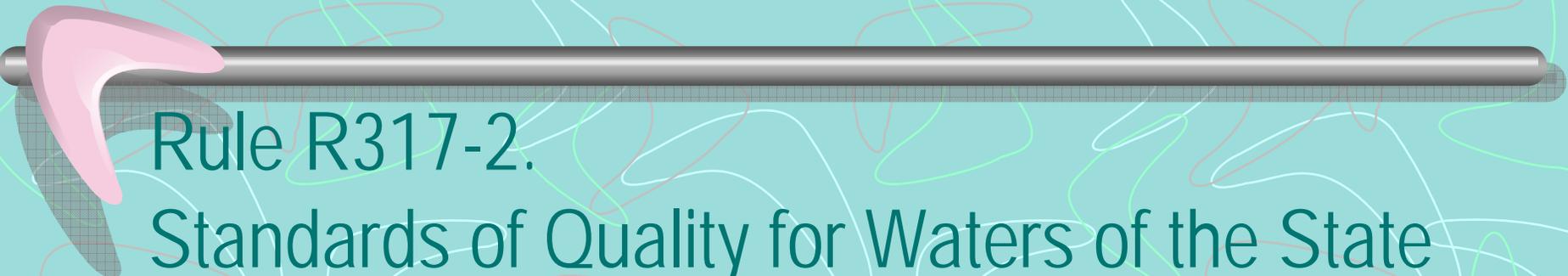
- R317-2-12. High Quality Waters.
  - 12.1 High Quality Waters - Category 1.
    - In addition to assigned use classes, the following surface waters of the State are hereby designated as High Quality Waters - Category 1:
      - a. **All surface waters geographically located within the outer boundaries of U.S. National Forests whether on public or private lands with the following exceptions:**
        - All High Quality Waters - Category 2 as listed in R317-2-12.2.
        - Weber River, a tributary to the Great Salt Lake, in the Weber River Drainage from Uintah to Mountain Green.
      - b. **Other surface waters**, which may include segments within U.S. National Forests as follows:
        - 1. Colorado River Drainage
          - Calf Creek and tributaries, from confluence with Escalante River to headwaters.
          - Sand Creek and tributaries, from confluence with Escalante River to headwaters.
          - Mamie Creek and tributaries, from confluence with Escalante River to headwaters.
          - Deer Creek and tributaries, from confluence with Boulder Creek to headwaters (Garfield County).
        - Indian Creek and tributaries, through Newspaper Rock State Park to headwaters.

## Rule R317-2.

# Standards of Quality for Waters of the State

- High Quality Waters - Category I
  - U.S. Forests (within the outer boundaries)
  - Other designated waters
- High Quality Waters - Category II
  - Discharge at background
    - Electric Lake
    - Deer Creek (4800 ft. upstream from forest boundary)
    - 80<sup>th</sup> percentile
- [Other waters (silent)].





## Rule R317-2.

# Standards of Quality for Waters of the State

- Levels of Antidegradation Review

- Level I

- Mathematical Determinations (Off-ramps)

- 11 Categories

- » e.g., ... for discharge permit renewals, if the increase in project loading over the prior permit is less than 20%

- Level II

- 8 Requirements in the Review
    - You may not be allowed to “pollute up to the standard”

$$d_o = \frac{(h_o \cdot f + h_s \cdot f)}{h_s}$$

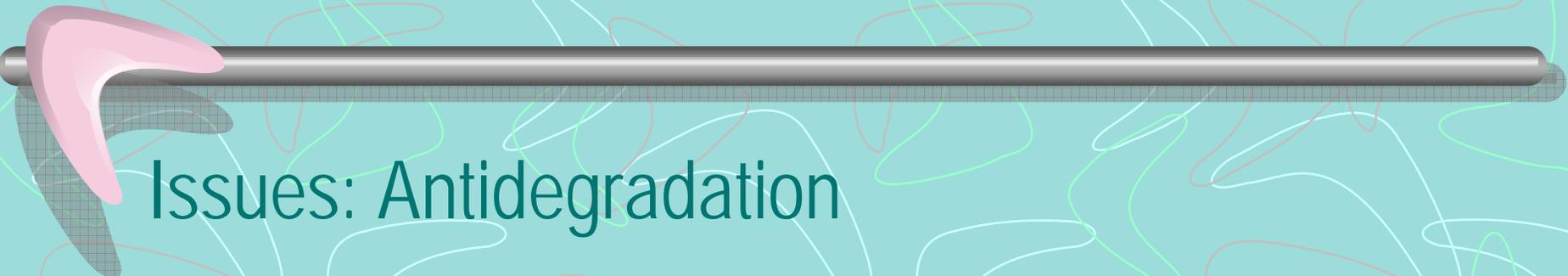
Where:

$d_o$  = distance from object to lens

$h_o$  = height of object

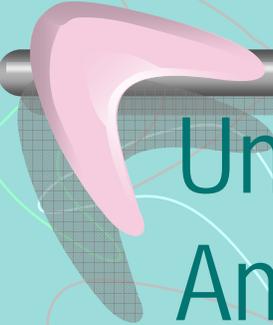
$f$  = focal length

$h_s$  = height of image sensor



## Issues: Antidegradation

- Level I procedures allow “pollution creep” from permit renewal to renewal
- Confusion between a Level I and Level II review.
- Excluding all but 3A and 3B waters is arbitrary and improper
- Too many off-ramps
- Parameter by Parameter Basis



# Understanding the Level I Antidegradation Review

- Excel Spreadsheet Example
  - Mayfield, Utah
  - Other Examples



## The Antidegradation Level II Review Process - 3.4.c

- Affected Agencies and the Public will be notified.
- Meetings with stakeholder may be held.
- UPDES permits: Public notification will follow the normal public notice requirements of the permit issuance requirements.



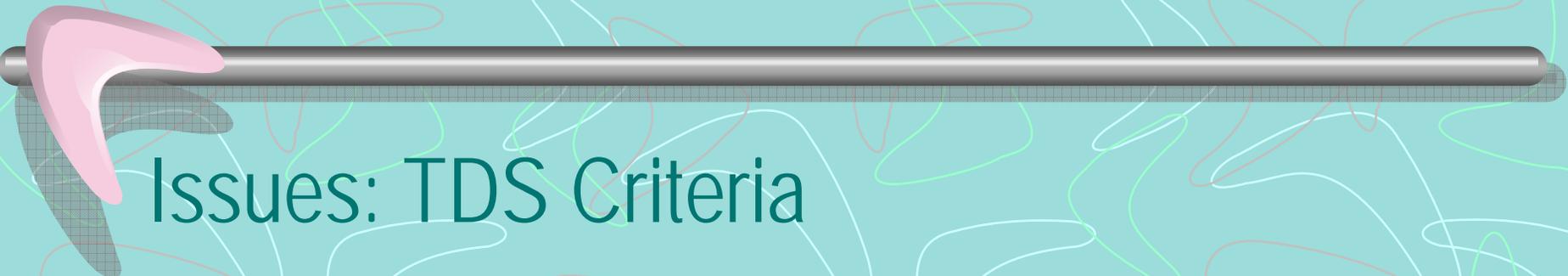
# The Antidegradation Level II Review Process - 3.4.c

1. All statutory and regulatory requirements will be met?
2. Are there less degrading alternatives?
  - 3.4.c.2 – Review List
3. Special Procedures for 404 Permits.
4. Information from applicant: Economic and Social Importance
5. Mitigation Plans to receive approval.
6. Water Quality Standards can not be violated.



# The Antidegradation Level II Review Process - 3.4.c

7. Existing Uses will be Maintained
8. Where existing use is higher than designated use, apply rules of existing use until rules are changed.
9. Special Procedures for Drinking Water Sources.
  - a. More stringent effluent requirements
  - b. Additional monitoring



## Issues: TDS Criteria

- Should the current two level TDS standard be maintained:
  - 1,200 mg/l for irrigated crops
  - 2,000 mg/l for stock-watering
- Rule is confusing in that there are two standards for the same classification (Class 4 Agriculture)
- Removing the 2,000 mg/l could affect de-icing our highways
- The maximum not to exceed value should not be eliminated, but strengthened.